



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/898,024	07/05/2001	Toru Inada	0054-0236P	9286
2292	7590	04/04/2006	EXAMINER	
BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			MOORE, IAN N	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 04/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/898,024	INADA ET. AL.	
	Examiner	Art Unit	
	Ian N. Moore	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4 and 5 is/are rejected.
- 7) ☒ Claim(s) 3 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. **Figure 3** should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claim 3 and 6 are objected to because of the following informalities:

Claim 3 recites, "**the second...**divided data packet" in lines 1-2. Claim 1 recites, "**a plurality** of divided data packets" in line 10-11, and "**two or more** associated divided packets" in line 19-20. It is unclear whether "**the second...**divided data packet" recited in lines 1-2 refers to the either "a plurality of divided data packets" or "two or more associated divided packets".

Claim 6 is also objected for the same reason as stated above in claim 3.
Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

Art Unit: 2616

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1,2, 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takiyasu et al, hereinafter "Takiyasu" (US Patent 5,113,392) in view of Bray et al, hereinafter "Bray" (US005161189A).

With regard to claims 1 and 4, Takiyasu discloses, if the length of a transmission message is equal to or shorter than 60 bytes (computing the packet length / comparing the computed packet length with a predetermined packet length), it can be transmitted by using a single cell. If it is longer than 60 bytes, it can be transmitted after being segmented (fragmentation unit) into a plurality of information blocks (plurality of divided data groups) on the 60 byte unit basis (predetermined data structure) (column 6, lines 17-22). The info field 16 (adding ... control information) indicates the position of a particular information block. For instance, if the information contained in the info field 16 is the first information block of a message segmented into multiple blocks, ST 15A is set to "10", "01" for the last information block, "00" for an intermediate information block and "11" for a single information block (column 6, lines 22-28).

Takiyasu does not expressly disclose encryption means for separately encrypting the plurality of divided data packets to form a plurality of encrypted packets; two or more associated divided data packets and the control information permits the associated divided data packets to be decrypted independently without waiting for the arrival of any other associated divided data packets.

Art Unit: 2616

However, Bray teaches encryption means (see FIG. 2, Encryption device 313; or see FIG. 3, encryption device 321,323; see col. 3, line 33-67) for separately encrypting the plurality of divided data packets to form a plurality of encrypted packets (see FIG. 5A-C; forming a first second, third, and fourth rekeying message segments 501,503,505,507,509,511,513,515 are encrypted into a first second, third, and fourth encrypted messages each including a message header (MH) 519,521,523,525; see col. 1, line 66 to col. 2, line 5; col. 4, line 30-65);

wherein the divided two or more associated divided data packets (see FIG. 5C, a first second, third, and fourth rekeying message segments, 503,507,511,515) and the control information (see FIG. 5C, MH 519,521,523,525) permits the associated divided data packets to be decrypted independently without waiting for the arrival of any other associated divided data packets (see FIG. 6, step 601,603,611,613; performing independent decryption on each message segment; see col. 5, line 43 to col. 6, line 5 . Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide encryption means to encrypt message segment and decryption each message segment independently without waiting for the arrival of other segments, as taught by Bray in the system of Takiyasu, so that it would save time, energy and necessary RAM storage; see Bray col. 2, line 39-43.

With regard to claims 2 and 5, refer to rejection of claim 1 (cryptographic apparatus).

With specific regards to the additional limitations of claim 2, Takiyasu discloses an asynchronous port 28 (terminal that receives) that includes a reassemble unit 51 (reconstructs the divided data groups) (column 8, lines 13-15). The info field 16 (control information) indicates the position of a particular information block (column 6, lines 22-28). Bray discloses a decryption apparatus (see FIG. 2, Encryption/decryption device 313; or see FIG. 3, encryption

Art Unit: 2616

device 321,323; see col. 3, line 33-67), which receives the plurality of encrypted packets transmitted from said cryptographic apparatus, separately decrypts each of the plurality of encrypted packets into the divided data packet (see col. 5, line 43 to col. 6, line 5), and transmits the plurality of divided data packets in the decryption order (see col. 5, line 52 to col. 6, line 10). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide decryption means to encrypt message segment and decryption each message segment independently without waiting for the arrival of other segments and transmitting decrypted segments, as taught by Bray in the system of Takiyasu, for the same motivation as stated above in claims 1 and 4.

Allowable Subject Matter

5. **Claims 3 and 6** are objected to in accordance with the objection set forth above in paragraph 2, and as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

6. There are no arguments with respect to claims 1-6; however, claims 1,2,4 and 5 are moot in view of the new ground(s) of rejection.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

9NM

INM
3-20-06



DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600